BIOS

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A Message From Your President

by Carol Engstrom

With summer in Alberta at its height, most of you are either busy in the woods or on the prairie doing field work or, if you are lucky, on vacation enjoying some of what nature has to offer.

We, as a Board, are also breaking for the summer, although there are still a few issues at hand. To name one: ongoing negotiations with British Columbia regarding entrance standards to meet TILMA and ASPB Ethics Standards (see article this issue).

I have a request of our Edmonton members: we need an able volunteer to spearhead our Professional Development Program. There are many workshops and speaker ideas from the Calgary group that could be easily initiated in the Edmonton area if there was a willing volunteer to step up to the plate. If you are interested, please contact me by email.

Finally I would like to thank Mr. Carl Warner for his services to the ASPB as Registrar for the past eight years. Our sincere thanks go out to you Carl. His successor is long time member and past ASPB President, Bette Beswick.

Enjoy your summer and I hope you are all taking some well-deserved vacation and enjoying it thoroughly. As always, please contact me if you have any feedback.

Letters to the Editor

I found two typos in the Spring 2008 BIOS, on page 5. The title reads "El Vueol del Condor", and the right spelling is "El Vuelo del Condor".

In the second line of the first paragraph "Adean condor", should be changed to "Andean condor".

If you have any feedback regarding previous BIOS editions, please email them to lindazim@shaw.ca.

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BIOS is published for the enjoyment of the members of the Alberta Society of Professional Biologists and those interested in the field of professional biology. Articles or comments are welcomed and should be sent to the editor, Linda Zimmerling at lindazim@shaw.ca.

Updates From the Executive and Board

Website
Check the website for BIOS Submission Guidelines, Board meeting minutes, events, member practice notes, and a searchable member database.

TILMA PROGRESS
On 12 June 2008, starting at 10:00 a.m. Edmonton time, there was a TILMA teleconference between Edmonton, Calgary and Victoria. Because so much is at stake, there were many influential players at this teleconference. They are listed below.

Present for ASPB were:
Carol Engstrom, P.Biol. (President, in Calgary)
Gerry Haekel, P.Biol. (Director)
Bob Holland, P.Biol. (ex-officio)
Robin Leech, P.Biol. (Executive Director).

Present for the Alberta Government were:
Lynda Johnson, POARA, Ministry of Employment (the Ministry responsible for Compliance);
Richard Skelton, Intergovernmental Relations (TILMA) - consultation coordination and clarification of TILMA requirements.

Present for the CAB-BC:
Linda Michaluk, R.P.Bio. (Executive Director)
Linda Stordeur, R.P. Bio. (Registrar).

Present for the British Columbia Government were:
Monica Gervais, TILMA, BC, consultation coordination and clarification of TILMA requirements
Erin Scraba, Ministry of Environment, BC, Ministry responsible for Compliance
Cindy Williams, TILMA, BC, consultation coordination and clarification of TILMA requirements.

A number of issues were covered and agreed upon by both Professional Regulatory Organizations (PROs) in the discussions, including Education, Practical Experience, References, Ethics, and Mandatory Continuing Competency Program (CCP).

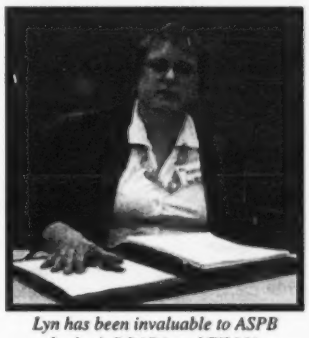
There are only two issues of disagreement remaining of entry standards differences between ASPB and APB-BC: the requirements by APB-BC that a professional report be part of the application, and that an Indictable Offences Declaration be given. As ASPB feels strongly that such a report and the declaration are not required, Carol Engstrom, P.Biol., president, wrote a letter to Dr. Paul McElligott, R.P.Bio., president, APB-BC, in late June, to express this. There has not been a reply to date (14 July 2008). At least one other Alberta PRO has members sign a statement when they turn their CCP in that they are not the subject of a criminal charge.

ASPB feels that the process for entry to our respective organizations can be different, but that the result can be the same (different process, same result). Ultimately, public safety and public protection are the issues.

Because PROs will start forming in other provinces, the question was asked at the meeting: do we need discussions with other provinces for full labor mobility in Canada? The answer is yes.

Robin Leech, P.Biol.

Lyn Johnson is the Deputy Registrar of the Professional and Occupational Associations Registration Act (POARA). She has extensive experience working with the professional legislation administered by the Professions and Occupations Branch of Alberta Employment and Immigration. Although her work is primarily focused on the twelve Professional Regulatory Organizations registered under that Act, including the ASBP, she also has experience working with the other 12 PROs that have legislation administered by the Branch.



Lyn has been invaluable to ASPB for both POARA and TILMA.

Record of Site Condition Forms

An issue has arisen regarding consultants signing the Record of Site Conditions (RSC) forms associated with Alberta Environment's process of Professional Sign-Off for Upstream Oil and Gas Reclamation Certificates.

The issue as brought to my attention is "As it currently stands, the declaration section of the form requires that the professional certifies that the *information supplied is correct*". [The individual] ha[s] a concern regarding the declaration section of the form, stating that professionals work to a standard of care, which is typically documented in a disclaimer that also limits third party reliance. Professionals do not work to a standard of absolute correctness. Signing off on such statements could expose the professional [and the company] to liability that would not necessarily be covered by the [company's] insurer because we cannot adequately state what the [company's] limitation of liability is in the RSC.

I have sought clarification with the AENV representative on Joint Environmental Professional Practices (JEPP). Darlene Howat gave me the following words in reply:

"Concerns regarding the current wording of the Section 8.0 Declaration in the Record of Site Condition have been raised by a number of consultants. As some consultants indicated they were unwilling to sign the form with its current declaration, Alberta Environment has provided an interim option. The Phase 2 ESA reports, remediation reports and risk management plans must be submitted to the department as usual, but can be submitted without the Record of Site Condition form if the consultant does not want to sign the current declaration. In place of the Record of Site Condition form, the consultant must attach a letter to the report or plan stating that they will submit the revised version of the Record of Site Condition form when it is released by Alberta Environment. The requirement to submit the Record of Site Condition with all Phase 2 ESA reports, remediation reports and risk management plans as of May 1, 2008 has not changed, but the above option provides some flexibility."

2008 D. Alan Birdsall Memorial Scholarship - $7000.00

Awarded to Justin Hanisch, Department of Biological Sciences University of Alberta

Justin is finishing his M.Sc. and has just been accepted to continue his research as a Ph.D. student at the U of A.

What Justin is studying

My research at the University of Alberta is collaborative, bringing together my co-supervisors, Drs. William Tonn and Cindy Paszkowski, two additional graduate students– Leslie Nasmith and Candra Schank, as well as Alberta Sustainable Resource Development (ASRD) and the Alberta Conservation Association (ACA). As a team, we are investigating how trout stocked into boreal foothills lakes of Alberta affect the native amphibians, forage fishes, and invertebrates of the receiving lakes. While trout stocking provides thousands of anglers in Alberta the opportunity to catch fish, stocked trout sometimes have serious negative effects on native organisms. Negative effects (such as the extirpation of native amphibians and zooplankton) are documented in low productivity alpine lakes; however, it is simply not known if these deleterious "trout effects" will manifest in the highly productive, shallow lakes of the boreal foothills. My research in our collaborative FIESTA (Fish, frog, Invertebrate Effects of Stocked Trout and Aeration) project uses stable isotope analysis to construct food webs in lakes with and without trout to determine how (and if) trout may affect the food webs of the boreal foothills lakes into which they are stocked. We are working closely with ASRD and ACA (which manage the trout stocking programs in Alberta) to understand the ecological implications of trout stocking in boreal foothills lakes.

Provincial Recreation Areas (51) and Bragg Creek Provincial Park Draft Management Plan Released for Public Review and Comment

20 June 2008

The draft management plans for the 51 Provincial Recreation Areas as well as Bragg Creek Provincial Park in the Kananaskis Management Area are now available for review and comment. When finalized, these plans will guide the management of important recreational, cultural and natural values as well as human activity in these protected areas.

Anyone with an interest can view the draft plans on the Kananaskis Country website (www.cd.gov.ab.ca/parks/kananaskis) or obtain a paper copy from the Canmore office of Alberta Tourism, Parks and Recreation by calling (toll free) 310-0000 then (403) 678-5500 ext 276).

The deadline for receiving written comments is September 30, 2008.

The planning team will carefully consider all comments received when revising and finalizing this plan later in the fall of 2008.

If you require further information about this draft plan or the planning process, contact Mr. Ray Andrews, Kananaskis Country Operations Manager (403) 678-5500 or Don Cockerton, Planner (403) 297-5969.

Thank you for your interest and participation.

Sincerely,
Ray Andrews
Acting Director,
Kananaskis Country

The ASPB Mentoring Program

by Marilyn Collard

Mentoring is one of the oldest known ways to pass wisdom and knowledge from one generation of professionals to the next. Historically significant mentoring systems include the following:

- Greek pederasty,
- Guru-disciple tradition practiced in Hinduism and Buddhism,
- Discipleship system practiced by Rabbinical Judaism and the Christian Church, and
- Apprenticing under the guild system.

Historically famous mentor-mentee pairs include Socrates and Plato, Plato and Aristotle, and Aristotle and Alexander the Great ("Mentorship" website. http://en.wikipedia.org/wiki/Mentoring. Accessed July 21, 2008).

Almost everyone can benefit from having a mentor. Most successful people have had a mentor at some time during their careers. Rey Carr of Peer Resources compiled a comprehensive list of famous mentor pairings on "The Mentor Hall of Fame" website (http://www.peer.ca/mentorpairs.html accessed July 21, 2008), including:

- Helen Davies (biologist) named in 1998 as the Lifetime Mentor by the American Academy for the Advancement of Science,
- Stuart Friend (K-Mart manager) mentor to Wayne Sales (CEO of Canadian Tire),
- Dr. Sam Gruber (biologist and shark researcher) mentor to Tim Calver (underwater photographer from Canada),
- Brian Mulroney (former Prime Minister of Canada) mentor to Karl Péladeau (Quebecor CEO),
- Peter C. Newman (award-winning Canadian writer) mentor to Robert Lewis (VP, Rogers Media),
- B.F. Skinner (psychologist) mentor to Robert Epstein (Editor-in-Chief, **Psychology Today**), and
- John Stevens Henslow (academic and clergyman) mentor to Charles Darwin.

Famous mentor quotes from that website include:

- Warren Bennis mentor to Howard Schultz (CEO, Starbucks) suggested to his mentee *"Recognize the skills and traits you don't possess, and hire the people who have them."*
- Bob Glavin (CEO, Motorola), mentor to Hector Ruiz (CEO of AMD), told Ruiz to *"Surround yourself with people of integrity, and get out of their way."*
- Sallie Krawcheck (CFO of Citigroup) was told by her mentor, *"Don't listen to the naysayers."*
- A.G. Lafley (Chairman and CEO of Procter and Gamble) was told by his mentor, *"Have the courage to stick with a tough job."*
- Anne Mulcahy (CEO of Xerox) was told by her mentor, *"When everything gets really complicated and you feel overwhelmed, you gotta do three things: 1) get the cow out of the ditch; 2) find out how the cow got into the ditch; and 3) make sure you do whatever it takes so the cow doesn't go in the ditch again."*
- George Steinbrenner (Owner, New York Yankees) said his mentor told him to *"Surround yourself with people who are smarter than you are."* (Little did he know how easy that was going to be).

Studies show that mentees are more likely to be promoted, to have higher salaries, and to enjoy overall job satisfaction (Rene Petrin, Management-Mentors, pers. comm., July 15, 2008). Organizations with mentoring programs have increased employee retention, reduced turnover costs, improved productivity, higher profitability, and enhanced knowledge transfer, among other benefits ("Why Employee and Corporate Mentoring" website, http://www.management-mentors.com/WhyEmployeeMentoring.Aspx. Accessed January 16, 2008).

So the question arises: How do you find a mentor, especially if your company doesn't have a formal mentoring program?

The ASPB Mentoring Program is a free service available to all ASPB Members. The main intent of the program is to match members with others who can provide them with what they may be missing professionally, including information, on-going advice and/or training. The program works on the premise that "We are each other's best stepping stones through which to pass on the learned experiences of those who have walked before us so that we can continue taking a strong profession into the future." Once members are matched, they work together to develop a "contract" that outlines their goals, objectives and a course of action. Partners commit to working together for a minimum of one year. Mentors and mentees that successfully complete one year in the program, receive 10 professional development credits.

To register for the program as a mentor or a mentee or to find more information, visit the ASPB website (http://www.aspb.ab.ca/mentoring) or contact the Mentoring Coordinator, Marilyn Collard, at mentoring@aspb.ab.ca or (403) 256-1902.

Biocides in Northern Waters

by Robin Leech, PhD, P.Biol.

Two Canadian scientists, John Smol and Jules Blais, who are half-brothers, have been awarded the Canadian Geographic Environmental Scientists of the Year.

These scientists, together with colleagues, conducted a study in 2003 that discovered sockeye salmon were pumping Polychlorinated Biphenyls (PCBs) into Alaskan lakes, and from the lakes into the food chain. Salmon acquire 95% of their biomass in the oceans, absorbing PCBs along the way. When they return in their millions to freshwater lakes to spawn, and die en masse, their decomposing bodies release the PCBs into the lake sediments. The greater the number of salmon returning to the lake, the greater the concentrations of PCBs in the sediments.

In another study, the brothers found that the guano in the sediments in ponds below the cliffs of Cape Vera, Devon Island, where there are huge colonies of the Northern Fulmar, was contaminated with industrially produced chemicals now banned worldwide from use. DDT, a biocide, and hexachlorobenzene, a fungicide, are being ingested by the birds in the southern hemisphere, transported thousands of kilometres from the source, then deposited in Arctic ecosystems.

Source: *Canadian Geographic magazine*, June 2008, article "Sibling Science" by Allen Abel, p. 54-62.

Scientific Assessment and the Wisdom of the Elders - The Answer is 42

by Don Harron, B.Sc., P.Biol.

In the early 1990s I was the Assistant Project Manager of a large multidisciplinary team conducting an environmental assessment of a proposed forest management plan. This was early in my career and I had little experience with First Nations, and in particular First Nation Elders. As a result of this assessment, and in the subsequent years, I have benefited from the gentle teachings from a number of elders and found that their wisdom has always complemented science. In science, obtaining the answer to the question is foremost, but as the elders have taught me, the old wisdom suggests that you must first understand the question; only then can you comprehend the answer. What follows is a true story of discovery of one man of science.

The forest plan assessment included a comprehensive plan to involve the local residents in the methods to be used in the environmental assessment. The methods were cutting edge for the time, Geographic Information Systems with heads up forest planning capability, Harvest Schedule Generator Models capable of projecting forest composition 100 years into the future, and a set of newly developed Wildlife Habitat Suitability Index computer models. As a techno-geek, I was in my element.

Involving the local First Nation communities in this program had proven difficult, and I was assigned the task of improving this situation. I sent letters to Chief and Council of each community, and subsequently made presentations to a number of these groups about the Forest Plan and Assessment. After one of these meetings, I was invited to stay and participate in a community feast that was being held that afternoon. It was at the feast that I first met the Elder. About a month later, we held a public open house in an adjacent community, and the Elder attended and approached me during the open house and we began a conversation.

I saw this as an opportunity to incorporate "Traditional Ecological Knowledge" into the assessment, so I inquired of the Elder as to the location of the moose habitat in the area. This is a standard question, the answer to which would allow us to modify the forest plan to avoid high quality habitat and "mitigate" effects. The Elder paused, then pointed to a small lake on the map and launched into a story about how when he and his younger brother were lads and trap/hunted in the area. To my shame and thinking that this had nothing to do with moose, I only half listened to his story. My mind was preoccupied with such important matters as whether the coffee machine was still full and the dainty plate well stocked.

At the end of the story, I posed my question again to the Elder. Again, after a brief pause he launched into a story about how he and his brother had recently returned to the area, and were unable to find their way, but their elderly father, who had not been in the area in over 40 years had no difficulty finding his way with his lifetime of experience at such things. Again when the story ended, I posed my question about the moose habitat in the area. The Elder sighed, and gave the most direct answer to a question I have ever received from an Elder: "It is all good moose habitat." I thanked the Elder, and we parted ways.

The answer frustrated me, for if it was all good moose habitat, then I could not mitigate and reduce the effects of the forestry plan. I felt that the answer was of no use to me. I returned to my office, and applied the cutting edge technology available to the assessment. The result of using the GIS to run the Moose Habitat Model was a beautiful coloured map showing the location of the best moose habitat. I had my answer and could now mitigate the effects of the forestry plan. But the words of the Elders are like ghosts that haunt your thoughts. The Elder had spoken of how things had changed since he was a lad. I wondered, and applied the Harvest Schedule Generator to predict the forest composition at five-year increments over 100 years, and then I applied the Moose Habitat Model to the twenty output files. The resulting maps were also very colourful and I was sure I now had all the information I needed for the assessment. But the words of the Elder haunted me further, for it was only with the benefit of a lifetime and more of experience that his elderly father had understood the true nature of the forest. I looked at the maps with a dawning realization, and took the best habitat from each of the twenty maps spanning 100 years and overlaid it onto a single map. It demonstrated of course that it was ALL good moose habitat.

The answer is obvious to me now, of course it should all be good moose habitat, classical vegetation succession rules suggest that this would be the inevitable result and I should have known this. Yet when the Elder first gave me the simple answer, I did not understand it. The Elder saw that I did not understand the question that I was asking. I understand now that the purpose of the stories was to educate me enough that I could be capable of understanding the answer, and I am thankful to the Elder for the time he took to share his wisdom.

I no longer ask Elders any questions, for they know the questions I need to ask better than I, and if I am open to it, they will guide me toward the path on which the answers I seek are found. I now listen carefully to the words of the Elders, and am not concerned if I do not understand what it is they are saying. Understanding will come in time, and only after I have learned enough to apply the words and wisdom that they have shared. I am grateful and I am a far better biologist and scientist as a result.

Virtual Water — A Better Way To Think About Water Use

by Robin Leech, PhD, P.Biol.

Do you know how much water it takes to grow coffee? Do you know how much water it took to grow or make this or that? Virtual water is a calculation of the water needed for the production of any product from start to finish. The information below uses measurements in pounds and gallons.

Here is how virtual water is calculated:

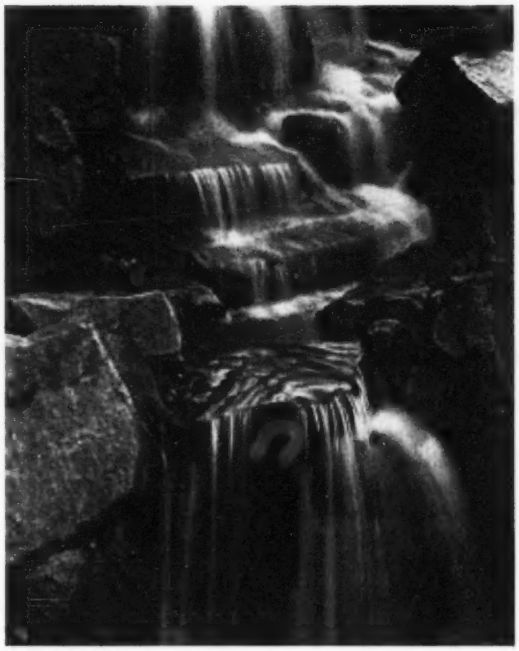
1. It takes about 155 gallons of water, on average, to grow a pound of wheat.
2. To produce a pound of meat, it takes 775 to 1550 gallons of water (5-10X wheat needs).
3. The footprint for a cup of coffee is 37 gallons; for an apple, 19 gallons; for a banana, 27 gallons.
4. The footprint for a slice of bread is 10 gallons; for a sheet of paper, 3 gallons; and for a pair of leather shoes, it takes 4,400 gallons.

All this is according to **Waterfootprint.org**, a UN, UNESCO-run web site, which provides a calculator for individual and national use of water. You may go to this site to check on your personal virtual water consumption.

The average person on Earth has a virtual water footprint of about 328,410 gallons of water each year. This sum includes everything used to make the food, clothing, and other water-driven products we consume. The average person in the US consumes 656,012 gallons per year. In China, the average footprint is only 185,412 gallons per year.

We use most freshwater for agriculture, not for drinking or bathing. Today, agriculture accounts for about 70% of all water use in the world, and up to 95% in several developing countries. So, it makes sense to first start looking at savings via food production. Meat production requires 5 to 10 times more water than does vegetable production. Swap veggies for meat in your diet, and you will save up to 750 gallons per day.

The US is a net water exporter, but population growth, pollution, and lingering drought in huge regions may change that. "As demand grows we are going to have to ask what it is being used for and whether that is a good use for our water," says Maude Barlow, cofounder of the Blue Planet Project. One-third of the water in the US is exported as virtual water when a number of major water systems in the US are in catastrophic decline. People may begin to ask, "Why are we shipping our water away?"



Dominant virtual water exporters in addition to the US are Canada, Australia, Argentina and Thailand. Countries with a large net import of virtual water are Japan, Sri Lanka, Italy, South Korea and the Netherlands.

Right now, we lose 30-50% of the food we grow - and all the virtual water in it - by the time it is ready for consumption, says Daniel Zimmer, executive director of the World Water Council (WWC). The losses come from harvesting, production, processing, transportation and storage.

The food industry may wind up fighting the biofuel industry for access to arable lands as the world runs short of water, warns Peter Brabeck, Nestlé's chairman and chief executive. "We will not find sufficient water to produce all the crops," he told the *Financial Times* in Feb 2008.

Where is all the water in the World? Listed below are percentage estimates.

South America	30%
Asia Pacific	17%
North America	15%
Middle East	11%
Eastern Asia	7%
Western Europe	4%
Central Africa	4%
Southern Asia	4%
Northern Africa	3%
Eastern Europe	2%
Southeastern Africa	2%
Japan	1%

There are 10,460 cubic miles of freshwater available on the planet as a resource each year, but the breakdown of worldwide access to it isn't equal. Understanding who has the good stuff and who is in need can allow us to maximize commerce in virtual water, helping to balance things out. For instance, Kuwait has essentially no freshwater; its residents live off desalinated seawater, which doesn't count as a direct resource. South America, on the other hand, has an enormous surplus of freshwater because of rainfall and its ecosystem, so it is a great exporter of virtual water. These stats: **Worldmapper.org**.

In the end, water parity and more supply will come only through increased awareness among individuals, as they are the ones who will drive the larger interests.

Source: Kostigen, Thomas M. Virtual water - a smarter way to think about how much H_2O you use. *Discover Magazine*, June 2008 issue, pages 22-26. Illustrated.

Ocean Reflux or Ocean Acidification

by Robin Leech, PhD, P.Biol.

Acidification of the oceans is an "immediate threat," says Kathleen McAuliffe. "Give it 50 years before the reefs disintegrate" (Discover Magazine, July 2008, p. 28-37).

The absorption of normal amounts of CO_2 is part of the carbon cycle, but the soaking up of CO_2 from industrial and vehicle emissions is making the oceans more acidic, threatening the foundation of life in the oceans.

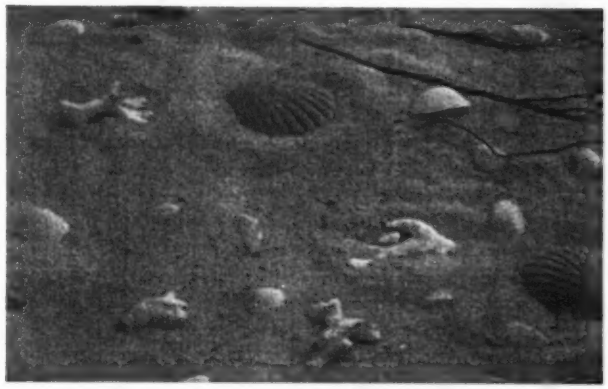
The problem is that, having absorbed hundreds of billions of tonnes of greenhouse gases since the start of the Industrial Revolution, the oceans started to become more acidic, and not in just a few spots. The chemistry of the entire ocean was shifting, imperiling coral reef, marine creatures at the bottom of the food chain, and ultimately, the planet's fisheries.

In 2003, Ken Caldeira (Nature), reported these findings and coined the term "ocean acidification." Scientists were so confident of the ocean's seemingly limitless capacity to absorb gaseous wastes that, by the turn of the millennium, the US, Germany and Japan were proposing to compress CO_2 from power plants into a gooey liquid and pipe it directly into the ocean's abyss. When the compressed material was introduced into the lab tanks, the spines of sea urchins and the shells of molluscs dissolved. Further studies stunned the researchers. They found that the mere absorption of CO_2 from the atmosphere into the ocean was enough to harm marine creatures.

Species evolve alongside one another in intricate relationships. When one group falters or is disrupted, another may flourish. Should the ocean acidification continue unfettered, there will be losers and winners.

The Losers: coral; coral reefs; shelled sea creatures (anything with a calcium carbonate shell, from microscopic plankton to molluscs to pteropods).

The Winners: cyanobacteria; dinoflagellates; seaweed (seaweeds are macroalgae, and compete with coral for light and space; since seaweeds grow more rapidly than coral, once the balance is tipped, coral recovery is all but completely choked off).



Wheat Straw — A New Canadian Paper Source

by Robin Leech, PhD, P.Biol.

All paper stock made in Canada is made from wood fibre, mostly from trees of the boreal forest. The "wheat sheet" is the result of a project that the Canadian Geographic magazine, Markets Initiative (a Canadian environmental group devoted to the protection of the boreal forest), the Alberta Research Council (ARC), and Dollco Printing of Ottawa have been working on for four years.

The goals of this project are to alleviate the stress on our species-rich and carbon-rich forests, and to demonstrate to the magazine industry and pulp-and-paper producers in Canada that high quality, magazine-grade paper can be made from a mix of fibres, including agricultural waste such as wheat straw.

Why wheat straw? Because wheat straw, unlike those of barley and oats, is not used for animal feed. Some is used for animal bedding, and some is ploughed back into the soil. Roughly 30% of it is waste by-product of a crop that is valued for its grain alone. Canada is one of the world's great wheat growers, and of an estimated 21 million tonnes produced, at least 8 million tonnes could be turned into pulp and enough paper for 20 million copies of magazines. Further, the straw could be a new source of revenue for farmers willing to bale and sell it to pulp and paper companies.

Wood fibre has a silica content of less than 1%. Wheat straw has a silica content of between 3 and 7%. The ARC scientists have developed a cleaning process for removing most of the silica before it is cooked into a pulp. The process has been taken from bench top to a 10-tonne/day pilot project. ARC wants to move to the next stage to work with a mill to turn the cleaned wheat pulp into paper. Canadian paper makers are not leaping on this; so, the ARC is seeking a partner who will likely be a mill owner in China.

The Canadian Geographic says that the next time it prints on a wheat sheet, it wants the straw to be purchased from Canadian farmers and pulped in a Canadian mill. The editor of the Canadian Geographic, Rick Boychuk, says that about 20% of the pulp for the June 2008 issue was made from wheat straw pulp made in China. Watch this spot.

Source: Rick Boychuk, editor, *Canadian Geographic magazine*. June 2008 issue, page 11, article titled "Introducing the wheat sheet".

BIOS Submission Guidelines

This document outlines submission guidelines for articles to be included in BIOS. These guidelines have been developed on the basis of the ASPB Regulations and Ethics as found on the ASPB website. Please also consider that BIOS is intended to enhance the communication to and between members of the ASPB, but that BIOS is distributed outside the ASPB and is not solely an internal document.

For the purposes of this document, only portions of the Regulations and Ethics sections have been presented. Please consider these statements when submitting articles for consideration in BIOS.

The purposes of the **ASPB**, as stated in its Regulations, are:

- to provide a common ground for professional biologists in all disciplines to exchange views on matters of mutual interest;
- to promote education in the field of professional biology;
- to provide a mechanism through which the public of Alberta will be assured of the highest possible standards in the practice of professional biology; and
- to provide a recognized voice for professional biologists in Alberta.

A professional biologist will:

- Attempt to convey to the public at large, as well as to other professions, an understanding of the basic concepts of biological sciences and its practice as related to the natural environment and the public welfare.
- Recognize the need for caution in the issuance of statements connected with public policies and resources.
- Ensure that public statements are unequivocal in informing the public as to the source of the statements and on whose behalf they are made.
- Recognize the public sensitivity in matters associated with biological resources, and that all the known facts should form the only basis for any public statement.
- Attempt to improve the quality of the profession by contributing to debates on education policies affecting the biological sciences.
- Attempt to keep abreast of advances in knowledge in the field of biology by supporting public discussion relevant to biological science.
- Recognize that an individual must make it clear whether statements are personal or have the support of the profession and the Society of which the biologist is a member.
- While holding membership, support the Society personally in matters on which the Society has adopted a position by common accord of its members.

The strength and value of the profession of biology will increase through discussion of issues which often will be contentious. As far as a healthy Society is concerned, these issues should be debated internally, as often as necessary, but with a unified front to the outside. The personal independence of the individual must be protected, but so must the public view of the profession.

Responsibilities to the Employer or Client:

- Not disclose confidential information obtained while employed in a salaried position, or acting as a consultant, unless authorized to do so by the employer or client.

BIOS Submission Guidelines:

Based on the above statements, the following submission guidelines have been developed:

- Submissions should be based on fact, or should clearly state that the submission is whimsical or a spoof.
- Submissions should never seek to cause harm or slander.
- Submissions of a contentious nature should clearly indicate the source of the article.
- Submissions should aim to inform and educate both the public and the membership.
- Submissions should be written in a professional manner and should not include profanity.

New Sections in BIOS

A 'Letters To The Editor' section will be available to accommodate submissions aimed at responding to something in previous BIOS editions.

An 'In The News' section will be inserted whenever a submission is received that is in response to articles circulating in the public forum. The submission will only be considered if it conforms to the Regulations, Ethics and Submission Guidelines listed above. These articles should aim to clarify issues that the public may have been misled about in the initial article, or to provide a biologist's viewpoint of the news story. The article that the submission is related to should be cited so people are able to locate and read it (or included in BIOS if the article is short).

All submissions will be reviewed by the Executive and Board prior to being published in BIOS. A written explanation will be provided to any authors regarding unaccepted submissions outlining why the article was not published.

A **Discussion Forum** page is planned for the ASPB website that will be available to ASPB members only (login required). This will allow an internal forum for discussions of contentious or controversial issues.

No advertisements will be accepted at this time.

ARTICLES WANTED

We are always looking for artifles to put in the BIOS newsletter. If you have a story or an issue you would like to share with your fellow professionals, please submit it to lindazim@shaw.ca.